

Z/041/63/000/001/001/004  
E160/E435

AUTHOR: Bayer, Zdeněk, Engineer

TITLE: A contribution towards the analytical investigation  
of combined heat cycles

PERIODICAL: Strojnický časopis, no.1, 1963, 5-27

TEXT: Combined heat cycles permit increasing the efficiency of conversion of heat into mechanical energy. Although the optimum operational condition of the component cycles is usually known, its determination for the combined cycle is a laborious process. The author presents an analysis and synthesis of the individual cycles and investigates the mutual influence of the basic parameters of these cycles as well as with their influence on the combined cycle. The study proceeds from a simple two-cycle to three- and multiple-cycle combination. Whilst the complexity of the investigation increases with the number of cycles involved, the process remains basically simple and manageable. The minimum number of governing parameters are determined, their relative influence on the efficiency of the combined cycle is analysed. The criteria of suitability of various combinations of the component cycles are investigated and the coupling of a number of

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E160/B435

A contribution towards ...

component cycles in series and in parallel is studied by synthesis. Conclusions from this study are applied to some aspects of gas-steam cycles. The investigation is limited to those cycles where gas and steam operate separately, with the gas cycle forming the high-temperature portion of the combined cycle. Here two possible variants arise with regard to the lower grade exhaust heat from the gas cycle; it can be used either for the preheating of air in the gas cycle, in which case the regeneration in the steam cycle is not affected, or it is used in feed heating in the steam cycle, which leads to the disturbed regeneration there and consequent reduction in efficiency. Although the latter has its compensations elsewhere, the use of this more complicated combination has to be justified by an overall economic advantage. Generally, the undisputed advantage of gas-steam combined cycle over a conventional power station, based on the steam turbine, has been established. The author also analyses in detail the combined cycles using two types of fuel - liquid and solid - and the importance of interaction between the cycles in the high temperature zone. It is shown that from the point of view of fuel

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utilization, the efficiency of utilization of a higher grade fuel is always greater than the overall thermal efficiency of the cycle and that it increases as the higher grade fuel content decreases. In the gas-steam cycles considered the efficiency of utilization of the high grade fuel reached favourable values. There are 8 figures and 1 table.

ASSOCIATION: Ústav pro výskum strojů ČSAV, Praha  
(Institute for Engine Research, ČSAV, Prague)

SUBMITTED: August 1, 1962

Card 3/3

BAYER, Z.

PHASE I BOOK EXPLOITATION

Z/6284

Jerie, Jan, ed., Engineer, Doctor, Corresponding Member of the Czechoslovak Academy of Sciences

Základní problémy ve stavbě spalovacích turbin (Basic Problems in the Construction of Gas Turbines [collection of articles]). Prague, Nakl. ČAV, 1962. 627 p. 1600 copies printed.

Sponsoring Agency: Československá akademie věd.

Ed. of Publishing House: Marie Moravcová; Tech. Ed.: František Končický.

PURPOSE: The book is intended to familiarize turbine designers with recent developments in the design of gas turbines and to present some research results which may be helpful in designing more efficient turbines.

COVERAGE: The book comprises articles by leading Czechoslovak turbine experts on thermodynamic cycles, flow research in turbine components,

burning of fuel in combustion chambers, axial compressors, and characteristics of turbines manufactured in Czechoslovakia.

Basic Problems in the Construction (Cont.)	Z/6284
L. Michalička (State Research Institute for Heat Engineering, Prague). The Use of Gas Turbines in Industrial Processes	77
✓J. Jerie (State Research Institute for Heat Engineering, Prague). Combustion Turbines of Highest Efficiency	95
V. Kmoníček (Institute for Machine Research, Czechoslovak Academy of Sciences, Prague). Some Heat Recovery Problems in Gas Turbine Cycles	119
L. Krejčí (Institute for Machine Research, Czechoslovak Academy of Sciences, Prague). Problems Related to a Temperature Increase in Gas Turbines	141
Z. Bayer (Institute for Machine Research, Czechoslovak Academy of Sciences, Prague). The Effects of Interstage Cooling, Reheating, and Precooling in Gas Turbine Cycles	161

Card 3/8

3/2

BAYER, Zdenek, inz.

Chemical fibers and their use in the textile industry. Tech praca  
15 no.7:553-554 Jl '63.

1. Zavodni pobočka Československé vedecko-technické společnosti,  
Zavody 1. mája, Liptavský Mikuláš.

BAYER, Z., inz.

Efficiency of gas turbines with blades cooled with liquid and steam.  
Strojirenstvi 14 no.11:803-811 N '64.

i. Institute of Thermomechanics of the Czechoslovak Academy of Sciences.

BAYER, Zdenek, inz.

Heat efficiency of steam-gas cycles. Stroj cas 15 no.2:  
172-188 '64

l. Ustav pro vyzkum stroju, Ceskoslovenska akademie ved,  
Praha.

BAYER, Z., inz. CSc.

Contribution to the optimization of steam-gas cycle parameters.  
Stroj cas 15 no.6:522-540 '64.

1. Institute of Thermomechanics of the Czechoslovak Academy  
of Sciences, Prague.

BAYER, Zdenek, inz. CSc.

Thermodynamic cycles. Stroj cas 16 no.2:230 '65.

High temperature thermodynamic cycles and their problems.  
Ibid.:230-238 '65.

1. Institute of Thermomechanics of the Czechoslovak Academy of Sciences, Prague. Submitted October 5, 1964.

L 62063-65 EPA/EPF(n)-2/EPR/EWP(k)/EPA(bb)-2/T-2/EWP(w)/EWP(f)/EWP(v) Pf-4/  
Ps-4 EM/WW

ACCESSION NR: AP5019252

CZ/0032/64/014/011/0803/0811

AUTHOR: Bayer, Z. (Engineer)

26  
37  
b

TITLE: Efficiency of gas turbines with blades cooled by liquid and steam

SOURCE: Strojirenstvi, v. 14, no. 11, 1964, 803-811

TOPIC TAGS: mechanical engineering, propulsion engineering, gas turbine engine, turbine blade, engine cooling system, cooling

Abstract: Author's Czech summary The problem that must be solved in designing an efficient cooling system for gas-turbine blades are analyzed, and the various solutions are compared in terms of their effect upon the efficiency of the turbine. Systems using air are briefly reviewed, and the systems using liquid and steam are discussed in greater detail. The principle of this method of cooling is explained. With the analytically derived formulas it is possible to compare the various methods of cooling. The optimum efficiency is in the temperature range of 1200 to 1400°C. Orig. art. has: 5 figures, 30 formulas, 14 graphs.

Cord 1/2

L 62063-65

ACCESSION NR: AP5019252

ASSOCIATION: Ustav termomechaniky CSAV (Thermomechanics Institute CSAV)

SUBMITTED: 00

ENCL: 00

SUB CODE: PR, TD

NP REF Sov: 003

OTHER: 008

JPRS

Card 2/2

L120210.66 / FEP(n)-2/EWP(f)/T-2/ETC(m) -5  
ACC NR: AP6010336

SOURCE CODE: CZ/0032/65/015/007/0483/0490

AUTHOR: Bayer, Z. (Engineer)

ORG: Institute of Thermomechanics, CSAV, Prague (Ustav termomechaniky CSAV)

TITLE: High-temperature combined steam-gas cycles

SOURCE: Strojirenstvi, v. 15, no. 7, 1965, 483-490

TOPIC TAGS: gas turbine, steam turbine, turbine cooling, turbine blade, high temperature research

ABSTRACT: The article compares various modifications of high-temperature, combined steam-gas cycles incorporating cooled gas turbines and condensing steam turbines and evaluates their relative advantages and disadvantages. The analysis indicates that only a few solutions could find practical application, that is, schemes in which heat removed by cooling can be fully utilized. To that category belong, e.g., systems employing high temperature liquid and operating with closed cooling circuits, and also systems in which the steam cycle is cooled by the working medium of the gas cycle. With inlet temperatures of 1500-1700°C and blades kept at 800°C the overall efficiency may be as high as 50-53%. This paper was presented by J. Juza, Engineer, Doctor. Orig. art. has: 16 figures and 26 formulas. [JPRS]

SUB CODE: 10 / SUBM DATE: none / ORIG REF: 007 / OTH REF: 004 / SOV REF: 005  
Card 1/1 7/1/85 UDC: 621.165-169;621.186.1/.4

BAYER, Zdenek, inz.

Contribution to the analytical method of examination of  
complicated thermal cycles. Acta techn Cz 8 no.6:581-  
591 '63.

1. Tschechoslowakische Akademie der Wissenschaften,  
Praha 6 - Dejvice, Puskinovo namesti 9.

L 3394-65 EAT(n)/EAP(j) PC-4 RW  
LOCATION #: APMU7200

6/01/99/64/006/010/1821/1824

ATTNID: RYABENK, G. I.; PONDAREV, G. S.; CHIKOVSKIY, L. F.; KULIKOVSKAIA, T. V.

TOPIC: System of polyimide resin, modification, unsaturated aldehyde,

polyamide resin, resin modification, unsaturated aldehyde,

Card 1/2

L 33945-65

ACCESSION NR: AP4047209

metath titration curves, it can be concluded that modification by aldehydes is  
not accompanied by any significant change in the molecular weight of the polymer  
with the results obtained by viscosity measurements. Visc. acc. test: 1.0000,  
1.0000, 1.0000, 1.0000.

SUBMITTER: Nizhny Novgorodskiy tekhnich. i inzh.-tekhn. institut im. Dzerzhinskogo (Nizhny Novgorod  
technological institute)

SUBMITTED: 0954c63

FNCT: DC

SUB CODE: MT

NO REP Sov: 004

OTHER: 004

Card 2/2

L 8947-66 ENT(m)/EWP(v)/EWP(j)/T/ETC(m) WH/RM

ACC NR: AP5026528

SOURCE CODE: UR/0286/65/000/019/0070/0070

AUTHORS: Bayeras, G. I.; Okhrimenko, I. S.

ORG: none

TITLE: Method for obtaining modified polycaproamide. Class 39, No. 175226  
[announced by Leningrad Technological Institute im. Lensoveta (Leningradskiy  
tekhnologicheskiy institut)]

SOURCE: Byulleten' izobreteny i tovarnykh znakov, no. 19, 1965, 70

TOPIC TAGS: polycaproamide, polymer, adhesive, adhesion

ABSTRACT: This Author Certificate presents a method for obtaining modified polycaproamide by treating polycaproamide with low molecular weight compounds. To impart high thermal and adhesive properties to the polymer, unsaturated aldehydes are used as low molecular weight compounds.

SUB CODE: 07/ SUBM DATE: 08Jul64

Card 1/1 (u)

UDC: 547.381

BAYERAS, G.I.; OKHRIMENKO, I.S.

Modification of mixed polyamides by acrolein. Vysokom. soed.  
8 no. 1s163-167 Ja '66 (MIRK 19:1)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.  
Submitted March 9, 1965.

L 43900-66 EWT(m)/EWP(j) RM  
ACC NR: AP6015656 (A) SOURCE CODE: UR /0413/66/000/009/0072/0072

INVENTOR: Bayeras, G. I.; Okhrimenko, I. S.

23  
B

ORG: none

TITLE: Method of preparing polyamide varnishes. Class 39, No. 181274  
[announced by Leningrad Technological Institute im. Lensoviet (Leningradskiy tehnologicheskiy institut)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 9, 1966, 72

TOPIC TAGS: polyamide, varnish, polyamide varnish

ABSTRACT: An Author Certificate has been issued for a method of obtaining polyamide varnishes with a mixed polyamide base in a mixture of alcohols with the introduction of a modifier. To improve the physical and mechanical properties of the polyamide and the varnish, acrolein or crotonic is used as the modifier. [Translation] [NT]

SUB CODE: 11/ SUBM DATE: 26May66/

07/

Card 1/1 201 UDC: 667.633.26:678.675-9:547.381

BAYERLE, B.

"Comments on A. Komm's Article "Asbestos-Cement Pipes and the Pressure Test" ."  
p. 242 (Yoda, Vol. 33, no. 9, Sept. 1953, Praha)

SO: Monthly List of East European Acquisitions, Vol. 3, No. 3  
Library of Congress, March 1954  
1953, Uncl.

BAYERLE, B.

Frozen soil and the safe depth for pipelines.

p. 156  
Vol. 5, no. 5, May 1955  
VODNI HOSPODARSTVI  
Praha

SO: Monthly List of East European Accessions (EEAL), LC, Vol. 5, no. 3  
March 1956

BAYERLE, B.

Theoretical problems of soil freezing.

p. 72 (Meteorologicke Zpravy) VOL. 10 no 3 June 1957. Praha, Czechoslovakia.

SO: Monthly Index of East European Accessions (EEAI) LC, Vol. 7, no. 1, Jan 1958

BAYERLE, Bohumil, inz.

Water reservoirs without embankment cover. Inz stavby 10  
no.9:346-348 S '62.

1. Vodni stavby Sezimovo Usti, stavební správa Teplice.

KRATKY, Jan, inz.; BAYERLE, Josef

Share of science and technology in the increase of labor productivity in the overburden operations of Sokolov District. Uhli 6 no.6:185-188 Je '64.

1. Sdruzeni hnedouhelnych dolu a briketaren, Sokolov.

OBRUCNIK, Miroslav; BAYEROVA, Galina

Possibilities in fluorescent and polarization microscopic examinations on the epiphysis in man. Cesk. morf. 10 no.3: 329-335 '62.

1. Histologicko-embryologicke ustanovitele lekarske fakulty Palackeho university v Olomouci, predn. Doc. Dr. Miroslav Obrucnik, C. Sc.  
(EPIPHYES anat & histol) (MICROSCOPY)  
(AGING physiol)

BAYEROWA, H.; PAWELECZYK, E.

Evaluation of stalks of certain types of poppy for morphine content. Farm.polska 11 no.3:49-52 Mar '55.

1. Państwowy Instytut Maukowy Leczniczych Surowcow Roslinnych w Poznaniu Dyrektor: prof. dr Fr. Adamanis.  
(MORPHINE, determination,  
in poppy stalks)  
(PLANTS,  
poppy stalks, determ. of morphine)

BAYERTUYEV A. A.

36303

Ob' otzyvchivosti grecikh na glubinu zadelki semyan. Zapiski Buryat-Mongol.  
Nauch-issled. IN-TA Kultury i ekonomiki, VIII, 1948, s. 88-92

SO: Letopis' Zhurnal'nykh Statey, No. 49, 1949

BAYERTUYEV, A. A.

"Cultivation of Buckwheat in Eastern Siberia." Cand Agr Sci,  
Omsk Agricultural Inst imeni S. M. Kirov, Omsk, 1955. (KL, No 11, Mar 55)

SO: Sum No. 670, 29 Sep 55 - Survey of Scientific and Technical Dis-  
sertations Defended at USSR Higher Educational Institutions (15)

AFANAS'YEVA, A.L., kand.biol.nauk; BAYNERTUYEV, A.A., kand.sel'skokhozyaystvennykh nauk; BAL'CHUGOV, A.V., kand.sel'skokhozyaystvennykh nauk; BELOZEROVA, N.A., agronom; BELOZOROV, A.T., kand.sel'skokhozyaystvennykh nauk; MAKSIMENKO, V.P., agronom; BERNIKOV, V.V., doktor sel'skokhozyaystvennykh nauk; BOGOMYAGKOV, S.T., kand.sel'skokhozyaystvennykh nauk; VOLNITS, O.S., agronom; BODROV, M.S., kand.sel'skokhozyaystvennykh nauk; BOGOSLAVSKIY, V.P., kand.tekhn.nauk; KHRUPPA, I.F., kand.tekhn.nauk; VERNER, A.E., doktor biol.nauk; VOZBUTSKAYA, A.Ye., kand.sel'skokhozyaystvennykh nauk; VOINOV, P.A., kand.sel'skokhozyaystvennykh nauk; VYSOKOS, G.P., kand.biol.nauk; GALDIN, M.V., inzhener-mekhanik; GERASIMOV, S.A., kand.tekhn.nauk; GORSHENIN, E.P., doktor sel'skokhozyaystvennykh nauk; YELNINSKAYA, A.V., inzhener-mekhanik; GERASKEVICH, S.V., mokhanik [deceased]; ZHARIKOVA, L.D., kand.sel'skokhozyaystvennykh nauk; ZHEGALOV, I.S., kand.tekhn.nauk; ZIMINA, Ye.A., agronom; BARANOV, V.V., kand.tekhn.nauk; PAVLOV, V.D.; IVANOV, V.K., kand.sel'skokhozyaystvennykh nauk; KAPLAN, S.M., kand.sel'skokhozyaystvennykh nauk; KATIN-YARTSEV, L.V., kand.sel'skokhozyaystvennykh nauk; KOPYRIN, V.I., doktor sel'skokhozyaystvennykh nauk; KOCHERGIN, A.Ye., kand.sel'skokhozyaystvennykh nauk; KOZHENVNIKOV, A.R., kand.sel'skokhozyaystvennykh nauk; KUZNITSOV, I.N., kand.sel'skokhozyaystvennykh nauk; LAMBIN, A.Z., doktor biol.nauk; LEONT'YEV, S.I., kand.sel'skokhozyaystvennykh nauk; MAYBORODA, N.M., kand.sel'skokhozyaystvennykh nauk; MAKAROVA, G.I., kand.sel'skokhozyaystvennykh nauk; MEL'NIKOV, G.A., inzhener; ZHDANOV, B.A., kand.sel'skokhozyaystvennykh nauk; MIKHAYLENKO, M.A., kand.sel'skokhozyaystvennykh nauk; MAGILEVTSVA, N.A., kand.sel'skokhozyaystvennykh nauk;

(Continued on next card)

AFANAS'YEVA, A.L.... (continued) Card 2.

NIKIFOROV, P.Ye., kand.sel'skokhozyaystvennykh nauk; NEFASHEV, M.I., lesoved; PERVUSHINA, A.N., agronom; PLOTHNIKOV, N.A., kand.biol.nauk; L.G.; kand.sel'skokhozyaystvennykh nauk; PAVLOV, V.D., kand.tekhn. nauk; PRUTSKOVA, M.G., kand.sel'skokhozyaystvennykh nauk; GURCHENKO, V.S., agronom; POPOVA, G.I., kand. sel'skokhozyaystvennykh nauk; PORTYANKO, A.P., agronom; RUCHKIN, V.N., prof.; RUSHKOVSKIY, T.V., agronom; SAVITSKIY, N.S., kand.sel'skokhozyaystvennykh nauk; BOLDIN, D.T., agronom; MESTEROVA, A.V., agronom; SERAFIMOVICH, L.B., kand. tekhn.nauk; SMIRNOV, I.H., kand.sel'skokhozyaystvennykh nauk; SEMBRYAJSKAYA, P.I., kand.tekhn.nauk; TOKHTUYEV, A.V., kand. sel'skokhozyaystvennykh nauk; FAL'KO, O.S., iznh.; MEDYUSHIN, A.V., doktor biol.nauk; SHEVLYAGIN, A.I., kand.sel'skokhozyaystvennykh nauk; YUFEROV, V.A., kand.sel'skokhozyaystvennykh nauk; YAKHTENFEL'D, P.A., kand.sel'skokhozyaystvennykh nauk; SEMENOVSKIY, A.A., red.; GOR'KOVA, Z.D., tekhn.red.

[Handbook for Siberian agriculturists] Spravochnaya kniga agronoma Sibiri. Moskva, Gos. izd-vo sel'khoz. lit-ry. Vol.1. 1957. 964 p.  
(Siberia--Agriculture) (MIRA 11:2)

BAKERTUYEVA, A.M.

BAKERTUYEVA, A.M.

Increasing therapeutic efficiency in acute dysentery by combining vaccine therapy with chlortetracycline. Antibiotiki 3 no.5:90-93 S-0 '58. (MIRA 12:11)

1. Kafedra infektsionnykh bolezney (zav. - prof. K.V. Bunin) i Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M. Sechenova.

(DYSENTERY, BACILLARY, ther.

chlortetracycline with vaccinother. (Rus))

(CHLORTETRACYCLINE, ther. use,  
dysentery, baccillary, with vaccinother. (Rus))

DAYERTUYEVA, A.M.

DAYERTUYEVA, A.M.

Effectiveness of treating acute dysentery with biomycin in combination with V. A. Chernokhvostov's alcoholic vaccine. Terap. arkh. 30 no. 12:60-64 D '58. (MIRA 12:1)

1. Iz kafedry infektsionnykh bolezney (zav. - prof. K.V. Bunin) i Moskovskogo ordena Lennina meditsinskogo instituta imeni I. M. Sechenova.  
(DYSENTERY, BACILLARY, therapy,  
chlortetracycline with vaccine (Rus))  
(CHLORTETRACYCLINE, ther.use  
dysentery, bacillary, with vaccine (Rus))

BAYERTUYEVA, A.M.

BAERTUYEVA, A.M., Cand Med Sci -- (diss) "Clinical <sup>course</sup> progress of acute dysentery and its outcome after treatment with biomycin in <sup>combination</sup> with Fleksner-Zonne vaccine." Mos, 1959, 19 pp  
(First Mos Order of Lenin Med Inst im I.M. Sechenov) 200 copies  
(KL, 36-59, 118)

90.1

- 81 -

Baertuyeva, A.M.

17(12)

SOV/16-59-6-4/46

AUTHOR: Baertuyeva, A.M.

TITLE: The Course of Some Immunological Indices in Dysentery Patients Treated With Chlortetracycline in Conjunction With Alcohol Flexner and Sonne Dysentery Vaccine

PERIODICAL: Zhurnal mikrobiologii, epidemiologii i immunobiologii, 1959, Nr 6, pp 18-23 (USSR)

ABSTRACT: A.S. Korshakova, G.Ya. Sinay, A.N. Meshalova and A.A. Dmitriyev agree that vaccine therapy has a positive therapeutic effect on dysentery. Ye.I. Milevskiy, K.V. Bashkardina, K.V. Bunin, P.A. Alisov, etc. have confirmed that antibiotics in medium doses have no depressive effect on immunogenesis in infectious diseases, provided they are not used in the very early stages of the disease when a decrease in the mass of the antigen stimulant may have a bad effect on immunogenesis. N.N. Klemparskaya has now refuted the theory that moderate doses of antibiotics can have an inhibiting effect on immunogenesis. Antibiotics alone give disappointing results in treating acute dysentery patients, and ways of combining them with vaccine therapy must be devised. For this reason the author made a comparative study of the complement and agglutinin titres during combined

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SOV/16-59-6-4/46

The Course of Some Immunological Indices in Dysentery Patients Treated With Chlor-tetracycline in Conjunction With Alcohol Flexner and Sonne Dysentery Vaccine

therapy with chlortetracycline and alcohol Flexner-Sonne divaccine, prepared by Chernokhvostov's method. The complement titre was determined by Yegorov and Yakubovich's method. The test group of dysentery patients was treated with chlortetracycline 4 times a day for 4 days in doses of 0.3 g, then 4 times a day for another 4 days in doses of 0.2 g. In addition they received Flexner-Sonne vaccine in doses of 0.5, 1, 1 and 1 ml at intervals of 48 hours. The control group received only chlortetracycline. The results showed a rapid rise in the complement titre in patients treated by the combined method and a more flaccid reparation of the intestinal mucous membrane in patients with a low complement titre. The complement titre rose steadily in patients who received vaccine, from a low level at the start of treatment to a normal level at the finish. In the control group the complement titre was still sub-normal at the end of treatment. The results also showed that immunogenesis was more depressed in chronic than in acute dysentery patients. The agglutination reaction in patients with acute dysentery, treated with chlortetracycline and vaccine, became positive in the early stages of the disease (4-6th day), reaching a titre of 400-800, but from

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SOV/16-59-6-4/46

The Course of Some Immunological Indices in Dysentery Patients Treated With Chlor-tetracycline in Conjunction With Alcohol Flexner and Sonne Dysentery Vaccine

this point on, no marked rise in the titre could be observed. Vaccine therapy, then, had a good effect on the complement and agglutinin titres in dysentery.

There are: 2 tables and 21 references, 19 of which are Soviet and 2 English.

ASSOCIATION: Kafedra infektsionnykh bolezney I Moskovskogo meditsinskogo instituta imeni I.M. Sechenova (Department of Infectious Diseases at the First Moscow Medical Institute imeni I.M. Sechenov)

SUBMITTED: January 15, 1959

Card 3/3

ZABELLO, M.L., kand.tekhn.nauk; BAYESHKO, M.F., red.; BOBROVA, YE.N., tekhn.red.

[Switching operations on railroads] Manevrovaya rabota na zheleznykh dorogakh. Moskva, Gos. transp. zhel-dor. izd-vo, 1958. 232 p. (Moscow. Vsesoiuznyi nauchno-issledovatel'skii institut zheleznodorozhnogo transporta. Trudy, no.160) (MIRA 11:9)  
(Railroads—Switching)

*Bayev*

BULGARIA/Chemical Technology - Chemical Products and Their  
Application. Synthetic Polymers, Plastics.

K-1

Abs Jour : Ref Zhur - Khimiya, No 2, 1958, 6395

Author : Bayev

Inst : -

Title : Lenoleum.

Orig Pub : Stroitel'stvo, 1956, 3, No 7, 26-28

Abstract : The properties of the raw materials used for producing linoleum (I) are given. The technology of I production as well as the properties of I are described.

Card 1/1

BAYEV, A., agronom.

A year's experience in growing corn. Mias. Ind. SSSR 27  
no.1:49-51 '56.  
(Corn (Maize))

(MLRA 9:6)

BAYEV, A., agronom.

For extensive participation in the All-Union Agricultural Exhibition of 1956. Mias.ind.SSSR 27 no.2:44-45 '56. (MLRA 9:8)  
(Moscow--Agricultural exhibitions)

BAYEV, A., k-rnd. sel'skokhozyaystvennykh nauk

Assigning work norms and making work evaluations on collective farms. Nauka i poved. op. v sel'khoz. 8 no.9:7-9 S '58.  
(Collective farms) (MIRA 11:10)

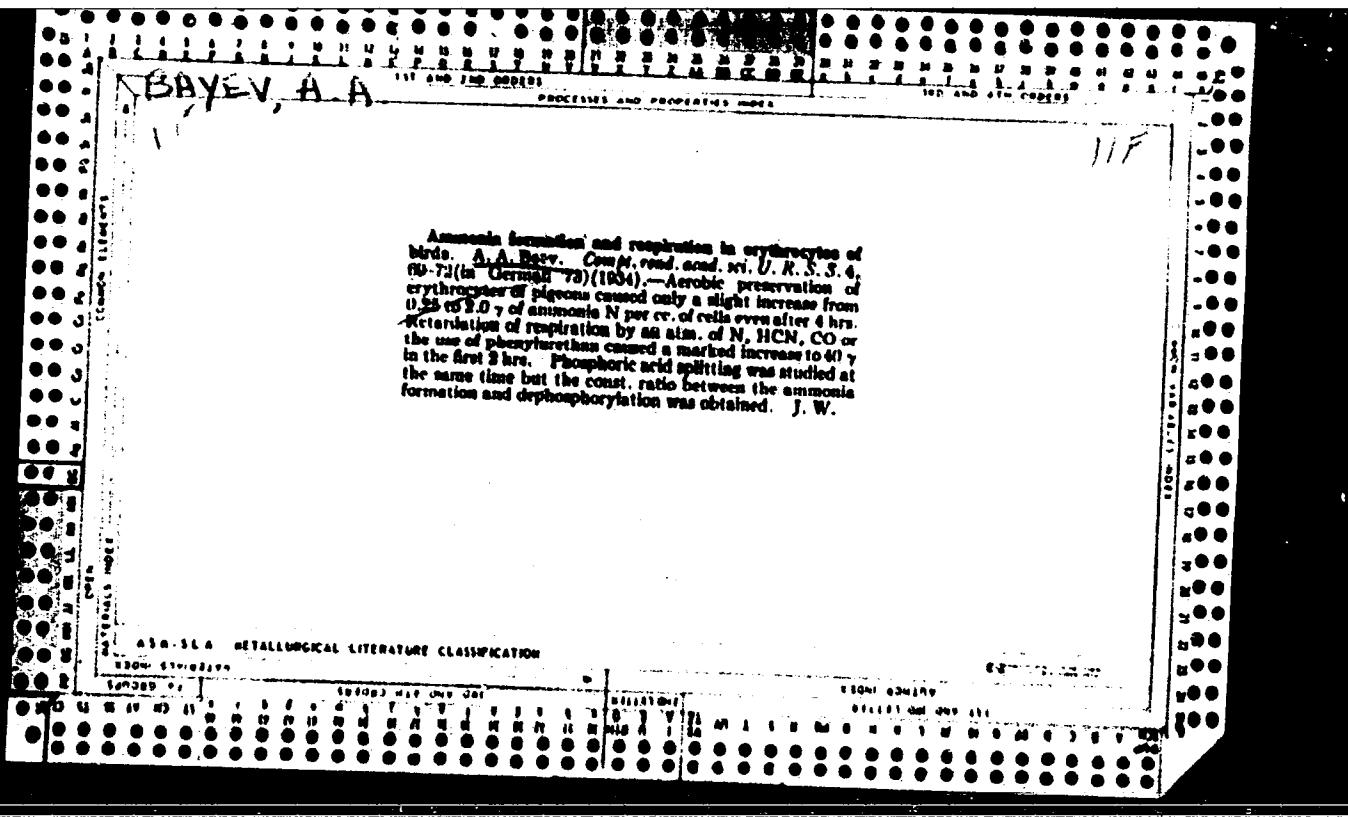
BAYEV, A.; SYNZINIS, B.

Efficient farm size and utilization of labor resources. Vop. ekon.  
no.3:111-119 Mr '60. (MIRA 13:2)  
(Khomutovka District--Collective farms)

BAYEV, A.A.

Effect of ascorbic acid and bioflavonoids on hyaluronidase activity.  
Biokhimiia 25 no.2:328-339 Mr-Ap '60. (MIRA 14:5)

1. Kazakhskiy gosudarstvennyy meditsinskiy institut, Alma-Ata.  
(HYALURONIDASE) (ASCORBIC ACID)  
(FLAVONOIDS)



BAYEV A.H.

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**Double mechanism of adenosine triphosphate stabilization in cells. I. Reticulocytes.** V. A. Raghuvaran and M. N. Yubimova. *Compt. rend. acad. sci. U. R. S. S.* IN. B. 2, 229-30 (1956) (in English); cf. *C. A.* 50, 1536. Young red blood cells (reticulocytes) in the rabbit, which appear during the regeneration of blood after severe anemia, possess a high aerobic glycolytic activity of the same order as normal nonnucleated erythrocytes and also an intense respiratory metabolism. Inhibition of either of these processes is accompanied by a partial breakdown of the adenosine triphosphate present. If complete disappearance of the adenosine triphosphate results, this double mechanism is supposed to be common to all cells having glycolytic and oxidative metabolism. **II. Nucleated avian erythrocytes.** V. A. Engelhardt and A. A. Babu. *Ibid.* 551-3 (in English); cf. *C. A.* 50, 1537. Inhibition of glycolytic processes in erythrocytes of pigeons, by suspension of the cells in glucose-free Ringer's soln. or by poisoning with fluoride or lactate, resulted in a marked increase of ammonia formation. Breakdown of adenosine triphosphate accounted for only 50-80% of the increase indicating that there are other sources of the ammonia. E. D. Walter

BAYEV, A. A.

11 AND THE OTHERS PROCESSES AND PROPERTIES

Ammonia formation in avian blood cells in relation to cellular respiration. V. A. Kugelhardt and A. A. Bayev. Biokhimiya 1, No. 1, 113-33 (in English 132-33) (1956). Pigeon blood, debrinated and washed by centrifuging with Ringer saline, was used in a suspension in Ringer saline containing 0.3% glucose. Prolonged incubation under aerobic conditions gave no NH<sub>3</sub>, but under N 18.43 γ of ammonia N/ml. of erythrocytes was formed in 1 hr. Similar results were obtained with HCN (0.01 N), CO and phenylurethan. Methylene blue, alone or with HCN or N, gave 25-43 γ in 30 min. Aerobic tests with quinone gave 8-20 γ in 30 min. According to the theory that adenosinetriphosphoric acid is the sole source of NH<sub>3</sub>, the molar ratio of P/NH<sub>3</sub> should be constant, but this was not found in the case; hence sources of NH<sub>3</sub> other than adenylic acid adenosine must exist. There is no tendency for reamination at the expense of the free NH<sub>3</sub>, and the process of deamination must be regarded as irreversible. The addition of pyruvic acid and phosphates has only a slight effect in suppressing anaerobic NH<sub>3</sub> formation. S. A. K.

*The Institute of Biochemistry, Academy of Science, USSR, Moscow*

ВАЧЕУ А.А.

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**Enzymic study of adenosine triphosphate changes in pigeon erythrocytes. A. A. Harv., Hashimoto 2, 484-78 (1937).**—The liberation of phosphates and ammonia in pigeon erythrocytes under anaerobic conditions is the result of a breakdown of adenosine triphosphate (I). Due to the absence of phosphate deesters and acceptors, dephosphorylation and subsequent deamination of I takes place during the oxidative process of cellular respiration. A certain amt. of NH<sub>3</sub> and P liberated in anaerobiosis do not have their origin in I. A small amt. of adenylic acid is at times found in the erythrocytes. Under aerobic conditions, the xanthine is stable, but during anaerobiosis, it becomes quickly deaminated. On restoring aerobic conditions, no reamination of the products of anaerobic decomposition products of I takes place. Just what is the organic component of the pyrophosphate fraction re-synthesized in aerobiosis, remains unknown. It may be inosine pyrophosphate or some other pyrophosphate compnd. A partial breakdown of I in aerobiosis is observed, in the absence of glycolysis, when polysaccharide takes place by fluorides and inosuccinates, or, to a smaller extent, by a deprivation of glucose.

Inst. of Biochemistry of the Acad. of Sciences USSR, Moscow

450-514 METALLURGICAL LITERATURE CLASSIFICATION

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(NUCLEOTIDES AND NUCIMOTIDES, in blood,  
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BAYEV, A.A., kand.biolog.nauk, red.; MEDVEDEVA, G.A., kand.biolog.  
nauk, red.; TURPAYEV, T.M., kand.biolog.nauk, redaktor;  
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ACC NR: AP6013991	SOURCE CODE: UR/0216/65/000/002/0221/0230
AUTHOR: Mirzabekov, A. D.; Bayev, A. A.--Baev, A. A.	26
ORG: Institute of Radiation and Physicochemical Biology, AN SSSR, Moscow (Institut radiatsionnoy i fiziko-khimicheskoy biologii AN SSSR)	B
TITLE: Study of the primary structure of soluble RNA by enzyme methods	
SOURCE: AN SSSR. Izvestiya. Seriya biologicheskaya, no. 2, 1965, 221-230	
TOPIC TAGS: RNA, enzyme, biochemistry	
ABSTRACT: This article is an analysis of the block method of determining the primary structure of soluble RNA. The possibility of completely decoding the structure of the individual oligonucleotides of ribonuclease hydrolysates of soluble RNA by means of the existing experimental techniques is described. The article details a method of reconstructing the original molecule from oligonucleotides obtained through the action of pyrimidyl-, guanyl-, and adenyl-RNase on soluble RNA. Some patterns of soluble RNA can be reconstructed in the same way. The statistically improbable but actually existing uneven distribution of nucleotides in the molecule and the complementary nature of fairly long and continuous portions of the polynucleotide chain are prerequisites of successful reconstruction. The potentialities of the block method are greatly enhanced if the molecules of soluble RNA can be dissociated from each of the pyrimidine residues. Orig. art. has: 3 tables. [JPRS]	
SUB CODE: 06 / SUBM DATE: 16Sep63 / ORIG REF: 007 / OTH REF: 017 Card 1/1	2. UDC: 577.1: 547.96

L 39928-66 ENT (H) RH

ACC NR: AP6029377

SOURCE CODE: UR/0427/66/019/002/0071/0078

AUTHOR: Zakharyan, R. A.; Bayev, A. A.

25

ORG: Institute of Molecular Biology, AN SSSR, Moscow (Institut molekulyarnoy biologii AN SSSR)

B

TITLE: Analytic column chromatography of preparations of transport RNA

SOURCE: Biologicheskiy zhurnal Armenii, v. 19, no. 2, 1966, 71-78

TOPIC TAGS: chromatographic analysis, RNA, mouse, rat, biochemistry, liver

ABSTRACT: Methacrylic acid and aminoethyl cellulose columns were tested with good results in measuring the high-polymer RNA ingredient in preparations of transport RNA (tRNA). The phenol-cetavlon (cetyltrimethyl-ammonium bromide) method was found suitable for obtaining tRNA from the liver of mice and rats. High polymer RNA ingredients of tRNA preparations were not detected by chemical methods. Both columns made it possible to detect reliably the high-polymer RNA ingredients in tRNA preparations. Fractionation with 1 M NaCl yields tRNA preparations free of high polymer RNA, which may run as high as 15% in tRNA preparations obtained from yeasts. Orig. art. has: 4 figures. [JPRS: 36,932]

SUB CODE: 06 / SUBM. DATE: 06Sep65 / ORIG REF: 007 / OTH REF: 008

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Card 1/1

09/7 8619

BAYEV, A.A.

Role of some vitamins in the pathology of the basic substance of the connective tissue. Vop. pat. i reg. org. krov. i dykh. no.1;171-178 '61.  
(MIRA 18:7)

BAYEV, A.A., inzh.; KOVALEVSKIY, O.M., inzh.

Moving span structures on floating supports. Transp. stroi. 14  
no.10:16-19 0 '64. (MIRA 18:3)

BAYEV, A.A., inzh.

Construction of supports for a trestle bridge across the Volga.  
Transp. stroi. 15 no.7 ill-13 Jl '65. (MIRA 18;7)

BAYEV, A.A., inzh.

Using removable cofferdams in the construction of footing  
grillage. Transp.stroi. 12 no.10:16-19 0 '62. (MIRA 15:12)  
(Bridge construction) (Cofferdams)

REVIS, I.A.; LEVINSON, A.M.; MOROZIK, Ye.P.; Prinimali uchastiye:  
ZHUKOBORSKIY, S.L., inzh.; BAYEV, A.A., inzh.; SOLOMAKHIN,  
S.I., inzh.; VESHCHEV, Ye.V., tekhnik; SYSOYEVA, Ye.Ya., laborant

Effect of the technology of the manufacture of the disk knives  
for paper cutting on their strength. Bumagodel, mash. no.12:  
176-206 '64. (MIRA 17:11)

1. Leningradskiy tekhnologicheskiy institut tsellyulozno-bumazhnoy  
promyshlennosti (for Zhukoborskiy, Bayev, Solomakhin, Veshchev,  
Sysoyeva).

BAYEV, A.B.

Verkhne-Dneprovsk Starch and Molasses Combine is the largest corn processing enterprise of the Ukraine. Sakh.prom. 37 no.9:49-54 S '63. (MIRA 16:9)

1. Verkhne-Dneprovskiy krakhmalo-patochnyy kombinat.  
(Ukraine—Starch industry)

BAYEV, Aleksey Ivanovich, kand. sel'skokhozyaystvennykh nauk; KATSNEL'SON,  
S.M., red.; BIRLOV, A.P., tekhn. red.

[New forms of labor organization on collective farms] Növye formy  
organizatsii truda v kolkhozakh. Moskva, Izd-vo "Znanie," 1958.  
31 p. (Vsesoiuznoe obshchestvo po rasprostraneniu politicheskikh i  
nauchnykh znanii. Ser.5, no.24). (MIRA 11:9)  
(Collective farms)

BAYEV, Aleksey Ivanovich, kand. sel'khoz. nauk; LEONOVA, T.S., red.;  
NAZAROVA, A.S., tekhn. red.

[Work practice of mixed brigades] Opyt raboty kompleksnykh  
brigad. Moskva, Izd-vo "Znanie," 1961. 39 p. (Narodnyi uni-  
versitet kul'tury. Sel'khoziaistvennyi fakul'tet, no.19)

(MIRA 15:4)

(Farm management)

BAYEV, A. K.

"The Effect of Cold Hardening on the Steel-Cutting Process." Cand Tech Sci, Georgian Polytechnic Inst Imeni S. M. Kirov, 29 Dec 54. (ZV, 18 Dec 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (12)

SO: SUM No. 556, 24 Jun 55

Bayev, A.K.

USSR/ Engineering - Metalworking

Card 1/1 Pub. 128 - 11/33

Authors : Kostyukov, Ya. Kh.; Bayev, A. K.; and Berezub, V. N.

Title : The workability of stainless steel

Periodical : Vest. mash. 36/1, 38-42, Jan 1956

Abstract : Studies conducted by the Kharkov Aviation Institute and the Kharkov Plant of Transport Machine Construction, in the field of cutting and grinding stainless steel are described and explained, together with methods of grinding, types of material, equipment and tools used, stresses and deformations occurring in worked specimens, and the cutting speeds and feeds. Two USSR references (1951). Diagrams; table.

Institution : .....

Submitted : .....

SOV/78-3-12-7/36

AUTHORS: Shchukarev, S. A., Novikov, G. I., Suvorov, A. V., Bayev, A. K.

TITLE: Optical and Tensiometric Investigation of the Chlorides of Hexavalent Tungsten (Opticheskiye i tensiometricheskoye issledovaniye khloroproizvodnykh shestivalentnogo vol'frama)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1958, Vol 3, Nr 12, pp 2630-2641 (USSR)

ABSTRACT: Several equilibria pertaining to the chlorine derivatives of hexavalent tungsten in the series  $WO_3$ - $WO_2Cl_2$ - $WOCl_4$ - $WCl_6$  were investigated. Optical and tensiometric methods were used in determining the products of the thermal decomposition. The starting materials were produced by chlorinating  $WO_3$  with  $CCl_4$ . At  $310-330^\circ C$   $WO_2Cl_2$  is obtained in ratio to the  $WO_3$  and  $CCl_4$  of 1:2.  $WCl_6$  is produced at  $290-300^\circ$  and 80-100 atmospheres. The purity of the starting product was found to be satisfactory. The absorption spectra of the  $WCl_6$  and  $WOCl_4$  were measured over the interval 4000-8000 Å. The optical density of the vapor

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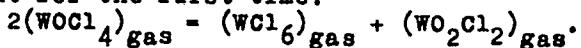
SOV/78-3-12-7/36

## Optical and Tensiometric Investigation of the Chlorides of Hexavalent Tungsten

phase from the decomposition of the  $\text{WCl}_6$  was measured. The decomposition proceeds according to the following equation:

$$(\text{WCl}_6)_{\text{gas}} = (\text{WCl}_5)_{\text{gas}} + 1/2 (\text{Cl}_2)_{\text{gas}}$$

The absorption coefficient  $x_{\text{WCl}_6}$  was determined for the saturated vapor, and the average value was found to be  $0.46 \pm 0.05$ . From the tensiometric data the melting and boiling temperatures of the  $\beta$ -form of  $\text{WCl}_6$  could be calculated. Using the optical and tensiometric methods the thermodynamic investigation of the following disproportionation process was carried out for the first time:



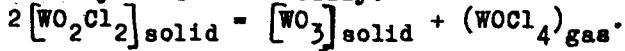
From the optical and tensiometric data for the saturated vapors and using the linear relationship  $\lg P = f(1/T)$  and  $\lg D = f(1/T)$  it was found that the absorption coefficient  $x_{\text{WOCl}_4} = 0.028 \pm 0.3$ . The change in the free energy in this reaction is expressed in the following equation:  $\Delta F^\circ_{\text{solid}} = -15100 \text{ cal} - 13,4 \text{ energy units} \cdot \text{wt.} \cdot \text{T}$ . The following disproportionation

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SOV/78-3-12-7/36

**Optical and Tensiometric Investigation of the Chlorides of Hexavalent Tungsten**

process of  $\text{WO}_2\text{Cl}_2$  was investigated thermodynamically and confirmed optically-tensiometrically:



The change in free energy in the process is expressed in the following equation:  $\Delta F^\circ_{\text{solid}} = 29100 \text{ cal} - 42.9 \text{ cal/degree(en.ed)}$

.T. The results show that the optical and tensiometric methods can be applied successfully to the determination of the partial composition of complicated gas systems. There are 11 figures, 8 tables, and 15 references, 6 of which are Soviet.

SUBMITTED: September 5, 1957

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